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(54) Title: TOTAL ORGANIC CARBON (TOC) ANALYZER

(57) Abstract: The invention disclosed is a total organic carbon (TOC) analyzer comprised of an electrochemical cell comprising a diamond-film electrode doped with boron or other conductivity including material. The diamond-film electrode is the working electrode and carries out the oxidation of TOC to produce carbon dioxide. The apparatus further comprises sensors for detecting the carbon dioxide produced. Such sensors include but are not limited to a tunable diode laser and/or ion-selective electrode. The invention also discloses a method for measuring TOC in an aqueous solution using a total organic carbon analyzer.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

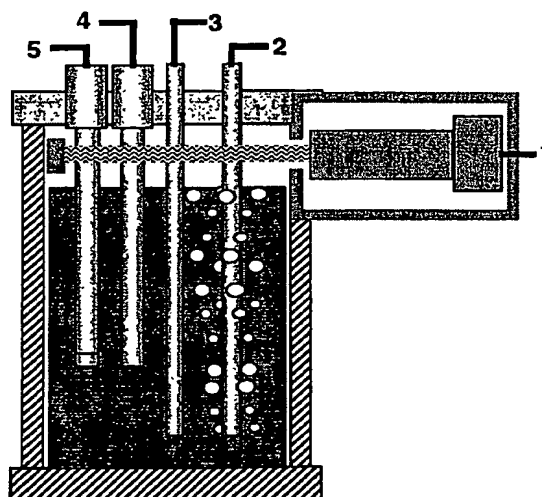
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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 9/24; G01N/11/00

US CL : 73/614, 23.37, 53.04, 54.13, 54.14, 54.17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 73/614, 23.37, 53.04, 54.13, 54.14, 54.17

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,808,178 A (ROUNBEHLER et al.) 15 September 1998, see entire document	1-13
A	US 6,541,272 A (MITRA) 01 April 2003 (01.04.2003), see entire document.	1-13
A	US 6,272,905 A (DRZEWIECKI) 14 August 2001, see entire document.	1-13
A	US 6,305,212 A (DRZEWIECKI) 23 October 2001 (23.10.2001), see entire document.	1-13
A	US 6,588,266 A (TUBEL et al.) 08 July 2003 (08.07.2003), see entire document.	1-13
A	US 4,977,785 A (WILLOUGHBY et al.) 18 December 1990 (18.12.1990), see entire document.	1-13
A	US 5,970,804 A (ROBBAT, Jr.) 26 October 1999 (26.10.1999), see entire document.	1-13

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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